



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/549,883

09/16/2005

Marion Kornelia Matters-Kammerer

DE030092

7484

24737 7590 03/28/2007

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

03/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/549,883

Applicant(s)

MATTERS-KAMMERER, MARION
KORNELIA

Examiner

Benny Lee

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The disclosure is objected to because of the following informalities: Note that subheadings should be provided to delineate the different sections of the specification. Page 1, lines 5, 6, note that "... for example in that functions are designed in ..." is vague in meaning and needs clarification. Page 2, lines 7, 11, note that reference to "point 1 to point 2" is vague in meaning and needs clarification; lines 19, 20, note that reference to "claim 1" and "claims 4 to 10" would be inappropriate for this portion of the specification and should be deleted. Page 3, line 18, note that the parameter " d_e " needs to be strictly defined for clarity of description. Page 4, regarding the brief descriptions of "Figs. 1(a), 1(b) and 1(c)", should these description be reference as --prior art-- for an appropriate characterization? Page 5, lines 5, 6, note that the description of "Fig. 3" needs further elaboration as to the features of what is depicted in that drawing figure; lines 13, 14, note that the description of reference labels "12" & "20" with respect to "Fig. 3" does not appear consistent with what is labeled in the drawing figure and needs clarification. Appropriate correction is required.

The disclosure is objected to because of the following informalities: Note that the following reference labels need to be described with respect to the corresponding drawing figure: Fig. 1a (0.35nH, 1.2pF); Figs. 1c, 4 (+10%, -10%); Figs. 2, 5a each "d" & "e" value; Fig. 3 (X, Y, Z); Fig. 5a (30, line capacitor electrode); Fig. 6b "I"; Fig. 7 (10, 18, 22, 24). Appropriate correction is required.

The drawings are objected to because of the following: In Figs. 1a, 1b, 1c, 6a, 6b, should these drawing figures be labeled as --PRIOR ART-- for consistency with the specification description thereof? In Fig. 1a, note that --point 1-- & --point 2-- should be provided such as to be commensurate with the specification description thereof at page 2, line 8. In Fig. 3, note that

Art Unit: 2817

reference labels (12, 20) need to be provided herein, such as to be commensurate with the description at page 5, lines 13, 14. In Fig. 5a, note that reference label --20-- needs to be provided such as to be commensurate with the description at page 5, line 15.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the specific “w” to “h” ratios as respectively recited in claims 1, 2, 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 3-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, note that it is unclear how the recited “dielectric layer (40)” and the “surrounding dielectric layers (12, 16) relate to the earlier recitation of a “multilayer stack” in claim 1, from which these claims ultimately depend (i.e. a part thereof, separate therefrom, etc). Clarification is needed.

In claim 5, note that “ d_e ” needs to be strictly defined for clarity of description

In claim 6, note that reference to “the next metallization structure in the plane” is vague in meaning since no such “next metallization structure” has been previously defined. Clarification is needed.

In claim 7, note that it is unclear what “it” is intended to refer to in the claim. Clarification is needed.

In claim 10, note that it is unclear whether this claim, as recited, is improperly alternative. That is to say, it appears that the first portion of the claim (i.e. the portion prior to the “or” recitation) defines a complete invention corresponding in scope to the subject matter recited in claim 1, while at the same time reciting features (i.e. after the “or”) features to a different invention, thus rendering the scope of this claim unclear. Clarification is needed.

The following claims have been found objectionable for reasons set forth below:

In claim 3, note that “of which is” should be rephrased for clarity of description.

Art Unit: 2817

In claim 4, note that “the following applies in respect of” and “: $\epsilon < \epsilon_{\text{medium}}$ ” should be respectively deleted and “--is greater than the dielectric constant of the dielectric constant of the surrounding dielectric layers--” should be inserted after “(14)” for an appropriate characterization.

In claim 5, lines 2, 3, it is suggested that “the following applies in respect of the layer thickness (d_{medium}) of the dielectric layer (14):” be deleted and that “--, where (d_{medium}) is the layer thickness of dielectric layer (14)--” be inserted after “5” for an appropriate characterization.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Saitoh et al.

Saitoh et al (e.g. Figs. 4, 5) discloses a metallization structure (e.g. 21, 22, 31, 32) arranged in a multi-layer stack with dielectric substrate (1) and lower ground plane layer (7) as best seen In Fig. 5, as evident from fig. 5, the metallization structure is in a common plane of the multi-layer stack configuration, which is a distance from and parallel to ground plane layer (7). As evident from Fig. 4, the metallizations (31, 32) form electromagnetic resonators, which inherently include a longitudinal portion acting as a coil (i.e. by virtue of the distributed inductance along the longitudinal portion) and a capacitor portion, which provides distributed capacitance with metallizations (21, 22) across gap (l_6) as well as with respect to the ground plane layer (7). Note that as described at column 3, lines 39-47, the metallizations (31, 32) have a width dimension (i.e. l_3), which is 5 mm and a dielectric plate (1) thickness of 0.8mm. Accordingly, the ratio of metallization width (l_3) to dielectric plate thickness is (5mm/0.8mm)

Art Unit: 2817

which yields a ratio greater than 6, and as such meets the claimed limitation of the ratio being greater than 3.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh et al in view of Komazaki et al.

Saitoh et al discloses the claimed invention except that the Saitoh et al metallization structure does not include a second ground electrode spaced a distance from the metallizations (31, 32) to yield a second metallization width to dielectric layer thickness of greater than 3.

Komazaki et al discloses in fig. 6(a), an LC filter configuration comprising metallizations (e.g. 42-1 ... 42-5) disposed on an upper surface of a dielectric plate (D4) with a metallize ground plane (e.g. 12) on an opposite side thereof. Komazaki et al discloses in Fig. 7(a) a modification to the fig. 6(a) configuration by adding a ceramic dielectric plate (60) having an upper metallization plating (60a) functioning as a ground plane to thus provide a high Q filter configuration.

Accordingly, it would have been obvious in view of the references, taken as a whole, to have modified the exposed upper metallization structures in Saitoh et al by providing a grounded upper dielectric layer, such as taught by Komazaki et al. Such a modification would have been considered obvious since it would have imparted to the Saitoh et al metallization structures the benefits of a high Q configuration afforded by the use of the dielectric layer and ground plane, as

Art Unit: 2817

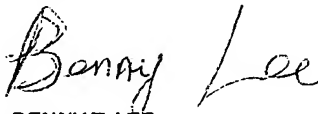
taught by Komazaki et al, thereby suggesting the obviousness of such a modification. Note that as an obvious consequence of the additional dielectric and ground layer, the metallization width to dielectric thickness must necessarily correspond to the values set forth in Saitoh et al for consistency in the teachings of Saitoh et al.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hirai et al discloses a stacked multilayer LC filter.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee


BENNY T. LEE
PRIMARY EXAMINER
ART UNIT 2817